

Book Reviews

anything that he found interesting. Could it be that, if there were the same kind of education at the present time, a few gifted people would still be found to interest themselves in wide-ranging investigations? But of course the less gifted would be left behind; perhaps we fail to get the very best by ensuring that all get something.

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Life of Lord Kelvin

Silvanus P. Thompson

Chelsea Publishing Co., 1977,

Vol. 1 xx + 584pp.

Vol. 2 xi + 713pp. £39.50

Why did a few great scientists of the last century manage to make really important advances over such a wide range of topics in both pure and applied science? One who invites this question is Kelvin, a founder member of the Society of Telegraph Engineers who became the first President of the Institution of Electrical Engineers when it replaced the Society. His scientific interests included thermodynamics, electricity, magnetism and dynamics, particularly of rotating bodies. He applied his mind to such diverse problems as the shape and age of the earth; the ultimate fate of the universe; the development of an absolute scale of temperature (the Kelvin scale); the discharge of a capacitor through inductive and resistive circuits; and absolute units for electrical measurements.

His interests in electricity involved him in the laying and working of the first transatlantic telegraph cable and introduced him to practical engineering problems. He devised the best methods for constructing and laying the cable, and developed a mirror galvanometer and syphon recorder which were essential for its successful operation. As a keen yachtsman, he developed a form of compass that was later used by the Royal Navy.

A reissue of Silvanus P. Thompson's work provides some answers to the question posed at the start of this review. Kelvin had been trained in the solving of problems by working for the mathematical tripos at Cambridge: afterwards, he found problems for himself in different branches of what we now call physics. That subject was unknown in universities at the time, and no course of lectures had provided him with an accepted approach to it; he was free to range widely and to investigate in detail